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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/866,011	05/25/2001	Toru Shima	1113-014/MMM	9610
21034	7590	06/02/2005	EXAMINER	
IPSOLON LLP 805 SW BROADWAY, #2740 PORTLAND, OR 97205			BHATNAGAR, ANAND P	
			ART UNIT	PAPER NUMBER
			2623	

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/866,011

Applicant(s)

SHIMA, TORU

Examiner

Anand Bhatnagar

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6, 7, 10, 11, 14-17, 20-22, 25, and 26 is/are rejected.
- 7) ☒ Claim(s) 2-4, 8, 9, 12, 13, 18, 19, 23 and 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Response to Arguments***

1. Applicant's amendment filed on 12/20/04 has been entered and made of record.
2. Applicant has amended claims 1, 7-9, 11, 17-20, and 22-25. Currently claims 1-26 are pending.
3. Applicant's arguments, see remarks, filed 12/20/04, with respect to the rejection(s) of claim(s) 1-4, 7, 11-13, 16-19, and 22-24 under 35 USC 102(b) and claims 6, 10, and 15 under 35 USC 103 (a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Foresti, G.L. ("**A real-time system for video surveillance of unattended outdoor environments**"; Circuits and Systems for Video Technology, IEEE Transactions on Volume 8, Issue 6, Oct. 1998 Page(s):697 – 704) and Jang et al. ("**Extracting velocity information of multiple moving objects**"; Surk-Woo Jang; Gye-Young Kim; Hyung-II Choi; Intelligent Vehicles Symposium, 1996., Proceedings of the 1996 IEEE 19-20 Sept. 1996 Page(s):136 – 140). Examiner refers to the rejection below.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11, 14, 15, 16/11, 22, 25, and 26 are rejected under 35

U.S.C. 102(b) as being anticipated by Foresti, G.L. ("**A real-time system for video surveillance of unattended outdoor environments**"; Circuits and Systems for Video Technology, IEEE Transactions on Volume 8, Issue 6, Oct. 1998 Page(s):697 – 704).

Regarding claims 11 and 22: Foresti discloses an optical monitoring system, comprising:

a moving body detection sub-system that images a monitored region onto an optical image plane and detects a moving body from changes over time in the monitored region (Foresti; page 697 abstract and 1<sup>st</sup> full paragraph half way down in right column; wherein moving objects are monitored in a surveillance area by a video surveillance system, i.e. an optical system).

a position detection sub-system that detects a position of the moving body in the optical image plane (page 698 right column lines 3-12, wherein the moving

object is localized and its position determined in the video/optical images, i.e. optical planes);

a scale detection sub-system that detects a size of the moving body in the optical image plane ( page 698 right column lines 12-17; wherein the changes in the size, the height and the length, of the MBR is determined. The MBR is the minimum bounding rectangle that has been computed around the moving object); and

a moving body estimation sub-system that decides whether the moving body is a predetermined monitored subject based on the position detected by the position detection sub-system and the size detected by the scale detection sub-system (fig. 1 after the object has been localized, i.e. its position determined, and object tracking performed, i.e. its dimensions/size is determined, then the object is classified/determined).

Regarding claim 14: The monitoring system wherein the moving body estimation sub-system includes a moving body evaluation sub-system that calculates an evaluation value indicating a certainty that the moving body is the predetermined monitored subject based on the position detected by the position detection sub-system and the size detected by the scale detection sub-system, the moving body evaluation sub-system deciding whether the moving body is the predetermined monitored subject based on the evaluation value of the moving body evaluation sub-system. See claim 5.

Regarding claim 15: The monitoring system of claim 11, wherein the moving body detection sub-system includes a solid-state imaging element in which image signals are generated in plural pixels for each of first and second successive image frames, wherein a difference is obtained between the image signals generated in each pixel for successive first and second image frames (Foresti; page 698 subsection II (System Architecture), wherein the pixel differences are determined between a frame and a background image. The background image is read as the first image and the frame read as the second image).

Regarding claim 16/11: The monitoring system wherein the moving body estimation sub-system decides whether a moving body is the predetermined monitored subject for a limited specified area of the monitored region. See claim 21.

Regarding claim 25: The monitoring method of claim 22, further including determining an evaluation value indicating a certainty that the moving body is the predetermined monitored subject based on the position detected in the optical image plane and the size detected in the image plane; and deciding whether the moving body is the predetermined monitored subject based on the evaluation value. (Foresti; tables 1 and 2, wherein the Specstrum vaues of the positions and sizes of the moving object(s) are determined and used to classify the object(s). This Specstrum value is read as the evaluation value of certainty).

Regarding claim 26: The monitoring method further comprising:

deciding whether a moving body is the predetermined monitored subject only for a limited specified area of the monitored region (Foresti; page 698 subsection II (System Architecture), wherein a MBR, minimum bounding rectangle is computed around the moving object. This MBR is read as a limited area of the monitored region).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5-7, 10, 16/1, 16/5, 17, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foresti, G.L. ("**A real-time system for video surveillance of unattended outdoor environments**"; Circuits and Systems for Video Technology, IEEE Transactions on Volume 8, Issue 6, Oct. 1998 Page(s):697 – 704) and Jang et al. ("**Extracting velocity information of multiple moving objects**"; Surk-Woo Jang; Gye-Young Kim; Hyung-Il Choi; Intelligent Vehicles Symposium, 1996., Proceedings of the 1996 IEEE 19-20 Sept. 1996 Page(s):136 – 140)..

Regarding claims 1 and 17: An optical monitoring system, comprising: It is rejected for the same reasons as claim 11 and 22 above and for the following limitations of:

a speed detection sub-system that detects a speed of the moving body in the optical image plane;

a moving body estimation sub-system that decides whether the moving body is a predetermined monitored subject based on the speed detected by the speed detection sub-system and the size detected by the scale detection sub-system.

Foresti discloses a system wherein different moving objects in a field of view can be identified/classified (as a car, person, lorry, vans, etc.) based on their positions and size in a video sequence (Foresti; fig. 1). Foresti does not teach to use speed of the moving object as a factor to identify/classify a moving object. Jang et al. teaches to use velocity (which is speed and direction) and clustering of a moving object to identify/classify the moving object (Jang et al.; abstract, fig. 1, and subsection 3 on page 137). It would have been obvious to one skilled in the art to combine the teaching of Jang et al. to that of Foresti because they are analogous in identify moving objects in a sequence of images. One in the art would have been motivated to incorporate the teaching of Jang et al. into the system of Foresti in order to make the system more efficient wherein a person can be identified easily, using speed as a variable, since a person's speed cannot generally match the normal speed of any type of vehicle.



Regarding claims 5 and 20: The monitoring system wherein the moving body estimation sub-system includes a moving body evaluation sub-system that determines an evaluation value indicating a certainty that the moving body is the predetermined monitored subject based on the speed detected by the speed detection sub-system and the size detected by the scale detection sub-system, the moving body evaluation sub-system deciding whether the moving body is the predetermined monitored subject based on the evaluation value determined by the moving body evaluation sub-system (Foresti; tables 1 and 2, wherein the Specstrum vaues of the positions and sizes of the moving object(s) are determined and used to classify the object(s). This Specstrum value is read as the evaluation value of certainty. Since It would have been obvious to one skilled in the art to incorporate speed as well to determine this).

Regarding claim 6: The monitoring system wherein the scale detection sub-system detects a size for the moving body in only one dimension in the image plane. Foresti teaches to perform this classification using 2D and/or 3D but does not teach to do this in one dimensional. One skilled in the art would can modify the system wherein it could be performed in only one dimensions.

Regarding claim 7: The monitoring system wherein the scale detection sub-system detects a size for the moving body in two dimensions in the optical image plane( Foresti; page 698 right column lines 7-13).

Regarding claim 10: The monitoring system wherein the moving body detection sub-system includes a solid-state imaging element in which image

signals are generated in plural pixels for each of first and second successive image frames, wherein a difference is obtained between the image signals generated in each pixel for successive first and second image frames (Foresti; page 698 subsection II (System Architecture), wherein the pixel differences are determined between a frame and a background image. The background image is read as the first image and the frame read as the second image).

Regarding claims 16/1 and 16/5: The monitoring system wherein the moving body estimation sub-system decides whether a moving body is the predetermined monitored subject for a limited specified area of the monitored region. See claim 21.

Regarding claim 21: The monitoring method further comprising:

deciding whether a moving body is the predetermined monitored subject only for a limited specified area of the monitored region (Foresti; page 698 subsection II (System Architecture), wherein a MBR, minimum bounding rectangle is computed around the moving object. This MBR is read as a limited area of the monitored region).

***Allowable Subject Matter***

6. Claims 2-4, 8, 9, 12, 13, 18, 19, 23, and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

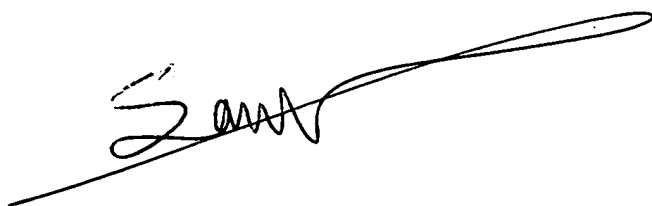
***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

**Contact Information**

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anand Bhatnagar whose telephone number is (571) 272-7416, whose supervisor is Amelia Au whose number is (571) 272-7414, group fax is 703-872-9306, and Tech center 2600 customer service office number is 703-306-0377.

A handwritten signature in black ink, appearing to read "Sam", with a long horizontal stroke extending to the right.

SAMUEL D. ED  
PRIMARY EXAMINER

Handwritten initials "AB" in black ink.

Anand Bhatnagar

Art Unit 2623

May 29, 2005